1 MATH 5

ELEMENTARY ANALYSIS

COURSE DESCRIPTION:

Conic sections and applications; limits and continuity of algebraic and trigonometric functions; derivatives of algebraic and trigonometric functions and applications to related rate problems, optimization, and curve sketching; integrals of algebraic and trigonometric functions, and area of a plane region.

1ST QTR

INTRODUCTION TO CALCULUS

I. CONIC SECTIONS
    A. Parabola
    B. Ellipse
    C. Hyperbola
    D. Unified Treatment
    Long Test 1: 1/2 JULY 2010

II. LIMITS
    A. Introduction to Limits
    B. Properties of Limits
    C. One-sided Limits
    D. Limits Involving Infinity
    Long Test 2: 29/30 JULY 2010

1ST PERIODIC EXAM: 3 – 5 AUG 2010

2ND QTR

CONTINUITY AND THE DERIVATIVE

III. CONTINUITY
    A. Continuity
    B. Limits of Trigonometric Functions

IV. THE DERIVATIVE
    A. Definition and Notation
    Long Test 1: 26/27 AUG 2010

    B. Differentiation Rules
    C. Derivatives of Trigonometric Functions
    D. Chain Rule
    E. Implicit Differentiation
    Long Test 2: 30 SEP/1 OCT 2010

2ND PERIODIC EXAM: 5 – 7 OCT 2010

3RD QTR

APPLICATIONS OF THE DERIVATIVE

V. APPLICATIONS OF THE DERIVATIVE
    A. Rates of Change
    B. Related Rates
    Long Test 1: 28/29 OCT 2010

    C. Extreme Function Values
    D. Increasing/Decreasing
    E. Concavity
    F. Curve Sketching
    Long Test 2: 25/26 NOV 2010

    G. Maxima-minima Problems
    Long Test 3: 9/10 DEC 2010

3RD PERIODIC EXAM: 14 – 16 DEC 2010

4TH QTR

THE INTEGRAL

VI. THE INTEGRAL
    A. Antidifferentiation
    Long Test 1: 20/21 JAN 2011

    B. The Definite Integral
    C. Properties of the Integral
    D. Fundamental Theorem of Calculus
    E. Area of a Plane Region
    Long Test 2: 17/18 FEB 2011

4TH PERIODIC EXAM: 23 – 25 FEB 2011

REMOVAL EXAM: 3/4 MAR 2011

GRADING SYSTEM:

LONG TESTS	30%
QUIZZES	20%
HW/SW/PS/PROJECT	20%
PERIODIC EXAM	30%

CONVERSION TABLE:

1.0	96 – 100%	2.0	72 – 77%	3.0	50 – 54%
1.25	90 – 95%	2.25	66 – 71%	4.0	40 – 49%
1.5	84 – 89%	2.5	60 – 65%	5.0	0 – 39%
1.75	78 – 83%	2.75	55 – 59%		

CONSULTATION HOURS:

MAM DINAH: _____

_____

SIR PETRI: _____

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REFERENCES:

1. The Calculus With Analytic Geometry. 6th Edition. *Louis Leithold.* (Textbook)

2. TC7. *Louis Leithold.* (Latest edition of the textbook)

3. Calculus: Early trancendentals. 5th Edition. *Stewart.*

4. Calculus with Analytic Geometry. 5th Edition. *Edwards & Penney.*

REMINDERS:

1. TENTATIVE GRADE IS COMPUTED IN PERCENTAGE AND IS ROUNDED-OFF TO THE NEAREST 1% BEFORE IT IS CONVERTED TO THE GRADE-POINT SYSTEM.

2. COMPUTATION OF THE PRESENT GRADE, EXCEPT FOR THE FIRST QUARTER, IS AS FOLLOWS:

    PRESENT = 1/3 PREVIOUS + 2/3 TENTATIVE
    THIS IS DONE IN THE GRADE-POINT SYSTEM AND THEN ROUNDED-OFF TO THE NEAREST GRADE-POINT.

3. THOSE WHO GET A FINAL GRADE OF 4.0 WILL NEED TO PASS (AT LEAST 50%) THE REMOVAL EXAM TO GET A GRADE OF 3.0. OTHERWISE HE/SHE WILL GET A GRADE OF 5.0

MATH 5
COURSE OUTLINE
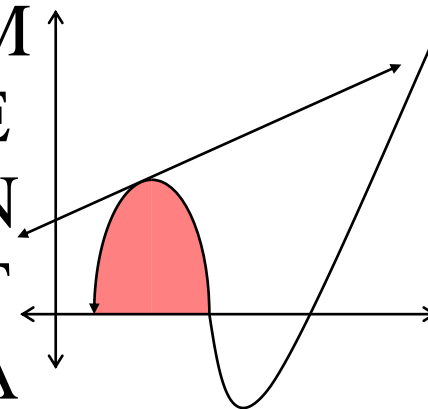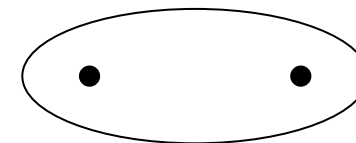
ELEMENTARY ANALYSIS

This copy belongs to:

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